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### **REMARKS**

This amendment is responsive to the office action dated March 10, 2004.

Claims 1-30 were pending in the application. Claims 1-30 were rejected. No claims were allowed by the Examiner.

By way of this amendment, the Applicant has amended Claims 1, 3, 5, 8, 10, 11, 14, 15, 17, 19, 20, 22, 24 and 25. Claims 9 and 21 have been canceled. Claims 2, 4, 6, 7, 12, 13, 16, 18, 23 and 26-30 remain unchanged.

Accordingly, Claims 1-8, 10-20 and 22-30 are currently pending.

#### **I. OBJECTION TO DRAWINGS:**

The Examiner stated that the drawings as filed with the application are unacceptable. Upon receipt of a notice of allowable subject matter, the Applicant will prepare and submit formal replacement drawings.

#### **II. REJECTION OF CLAIMS UNDER 35 USC 112**

Claims 1-30 were rejected under 35 USC 112, second paragraph as being indefinite, vague and confusing for failing to distinctly point out the subject matter. Specifically, the Examiner identified several claims that lacked various and required structural interconnections and additional structure/means to enable the claimed functional language. The Applicant has amended all of the claims identified by the Examiner to provide sufficient structure and interrelationships between the structural elements to enable the invention and to provide definiteness within the claim language.

Based on the amendments made, the Applicant believes that the claims are now definite and accordingly, reconsideration and withdrawal of the rejection is respectfully solicited.

#### **III. REJECTION OF CLAIMS UNDER 35 USC 103**

Claims 1-30 were rejected under 35 USC 103(a) as being unpatentable over US Patent No. 6,647,040 (Dietrich et al.) in view of US Patent No. 3,373,387 (Bosch et al.). The Examiner has stated that Dietrich discloses an apparatus for driving lasers

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comprising a laser current controller providing a modulation and bias signal, high speed current drives to produce a drive signal and a photodetector feedback circuit and that although Dietrich does not disclose a detector having a capacitor configured for slow discharge, Bosch discloses this configuration and that all of the claims of the present invention is obvious in light of the combination of these references.

Applicant has significantly amended the claims to more clearly identify the claimed subject matter of the present invention. As is stated in the specification, the traditional control structures such as the one in the Dietrich reference are not effective in monitoring the output of high speed laser arrays such as those utilized in modern communication systems. Due to the speed of the sequential transmission of data the monitoring diodes utilized in the feedback/monitor loops are generally not fast enough to reach a full charge based on a single transmission bit. Generally, the bit passes before the photodiode reaches full charge and accordingly a low reading is then transmitted by the photodiode. Further, it is highly unreliable to monitor laser output by monitoring the data stream and waiting for numerous sequential and identical bits of data, ie a string of repetitive 1's or a string of repetitive 0's so that the control loop can obtain a meaningful reading from the photodiode. However, in the prior art this is precisely how the feedback loop operates when a laser array is utilized to transmit high speed, high frequency data.

The present application is directed at a laser control assembly that overcomes this drawback in the prior art by separating the monitoring function from the high speed data transmission array of lasers. In this manner a secondary feedback laser is provided that is driven by the same current driver which drives the primary laser array. However, when the controller goes into a periodic monitor mode, the signal sent to the secondary laser is modulated at a speed that is significantly slower and at a significantly lower frequency than the signal being transmitted over the primary array. In this manner, the slower data stream is transmitted to the monitoring photodiode at a speed that allows the photodiode to properly register the full modulation amplitude of the transmitted data stream thereby providing highly accurate feedback to the control device as compared to the prior art. The claims of the present application have been amended to clearly and particularly disclose this structure.

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There is no teaching of the concepts of the present invention wherein a secondary laser is driven as a lower modulation frequency as compared to the modulation frequency of the primary array in the reference cited by the Examiner. Further there is no disclosure in either Dietrich or Bosch either alone or in combination that discloses the use of a secondary independent laser for monitoring the controller output at all. Since the cited references, Dietrich and Bosch either alone or in combination do not suggest or teach the claimed subject matter of the present invention, they cannot be combined to arrive at the present invention.

Reconsideration of claims 1-30 is respectfully solicited in light of the amendments to the claims and the comments above in support of patentability.

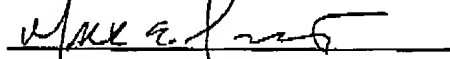
IV. CONCLUSION

Accordingly, claims 1-30 are believed to be in condition for allowance and the application ready for issue.

Corresponding action is respectfully solicited.

PTO is authorized to charge any additional fees incurred as a result of the filing hereof or credit any overpayment to our account #02-0900.

Respectfully submitted,



Mark E. Tetreault, Esq.  
Reg. No. 48,289

BARLOW, JOSEPHS & HOLMES, Ltd.  
101 Dyer Street, 5<sup>th</sup> Floor  
Providence, RI 02903  
(401) 273-4446 (tel)  
(401) 273-4447 (fax)  
met@barjos.com